CUNY AR/VR

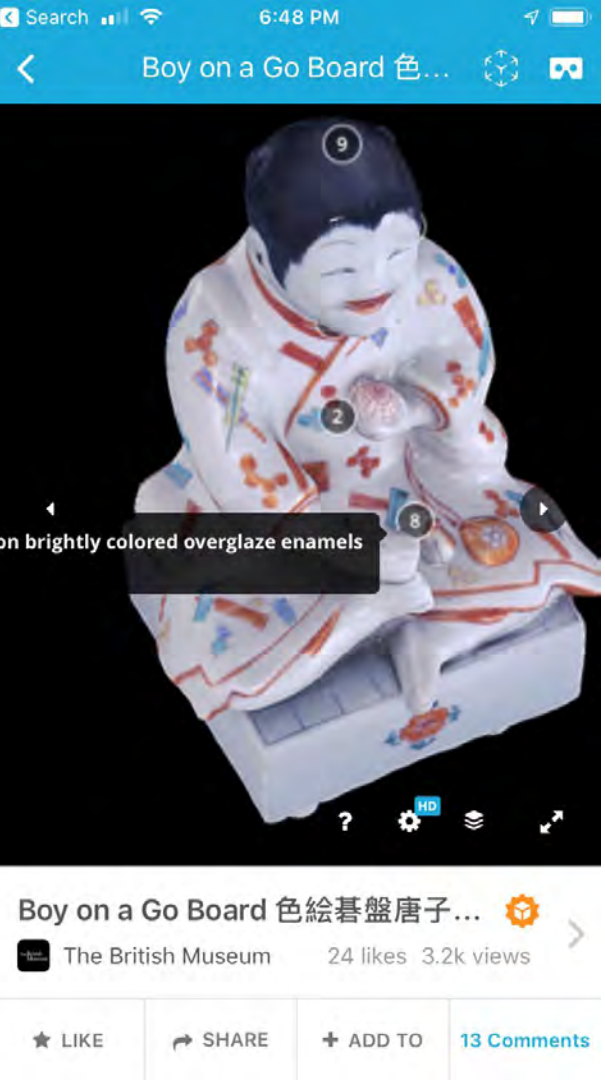
12/06/2019

- AR/VR Tools + Applications
- Skills and Job Opportunities
- What's happening on other campuses
- AR/VR at CUNY
- AR/VR at Newmark Journalism School
- Announcements/Opportunities

Matt MacVey
Academic Program Specialist,
AR/VR Journalism Lab
Newmark Graduate School of Journalism CUNY

Immersive Stories: 360 Video

Rohingya Exodus, Associated Press



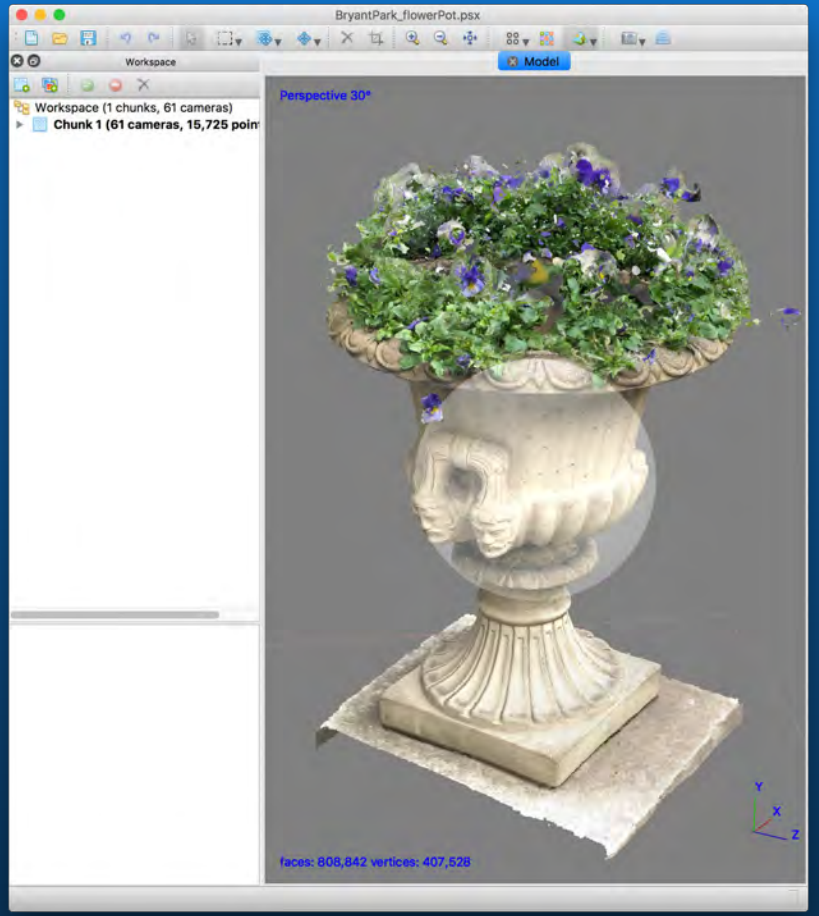
3D Asset Creation

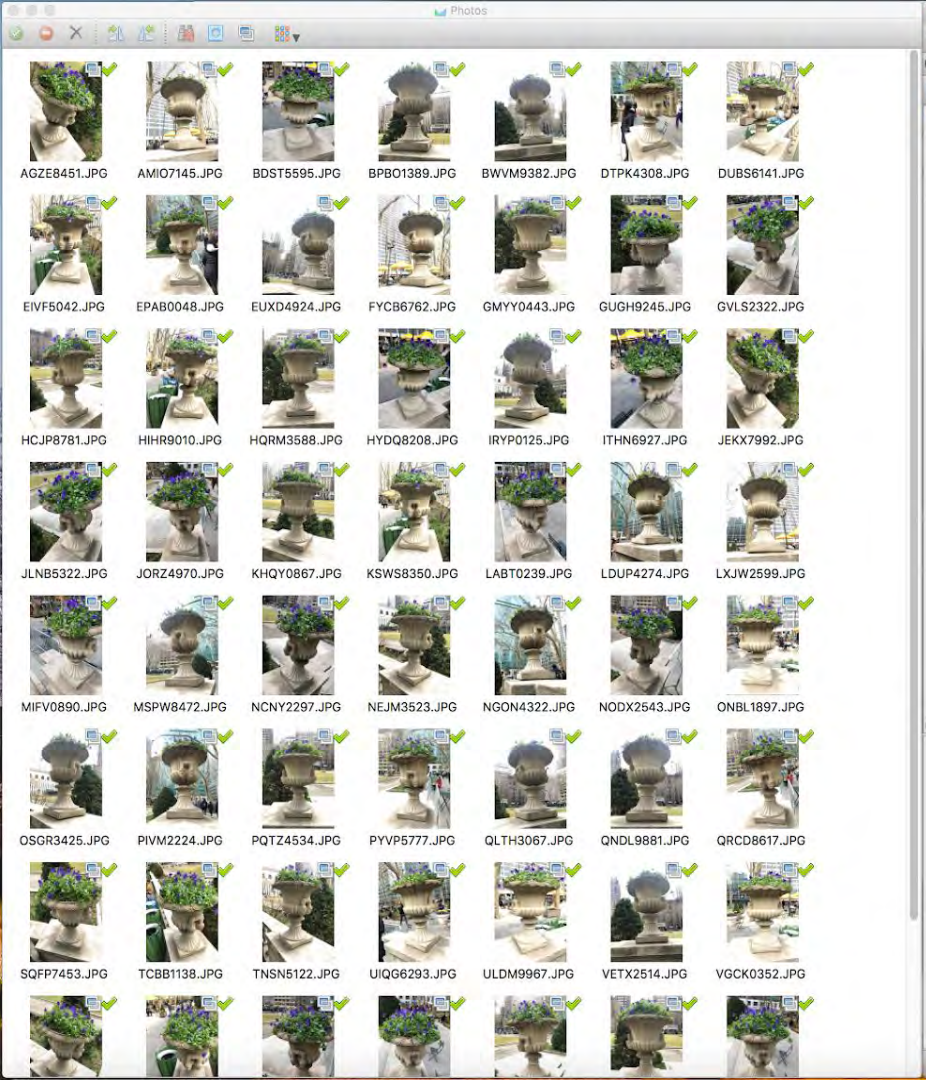
Use Photogrammetry to create 3D models from photos

TOOL:

Photogrammetry

- Reality Capture
  or
- Agisoft Metashape

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DUBS6141.JPG
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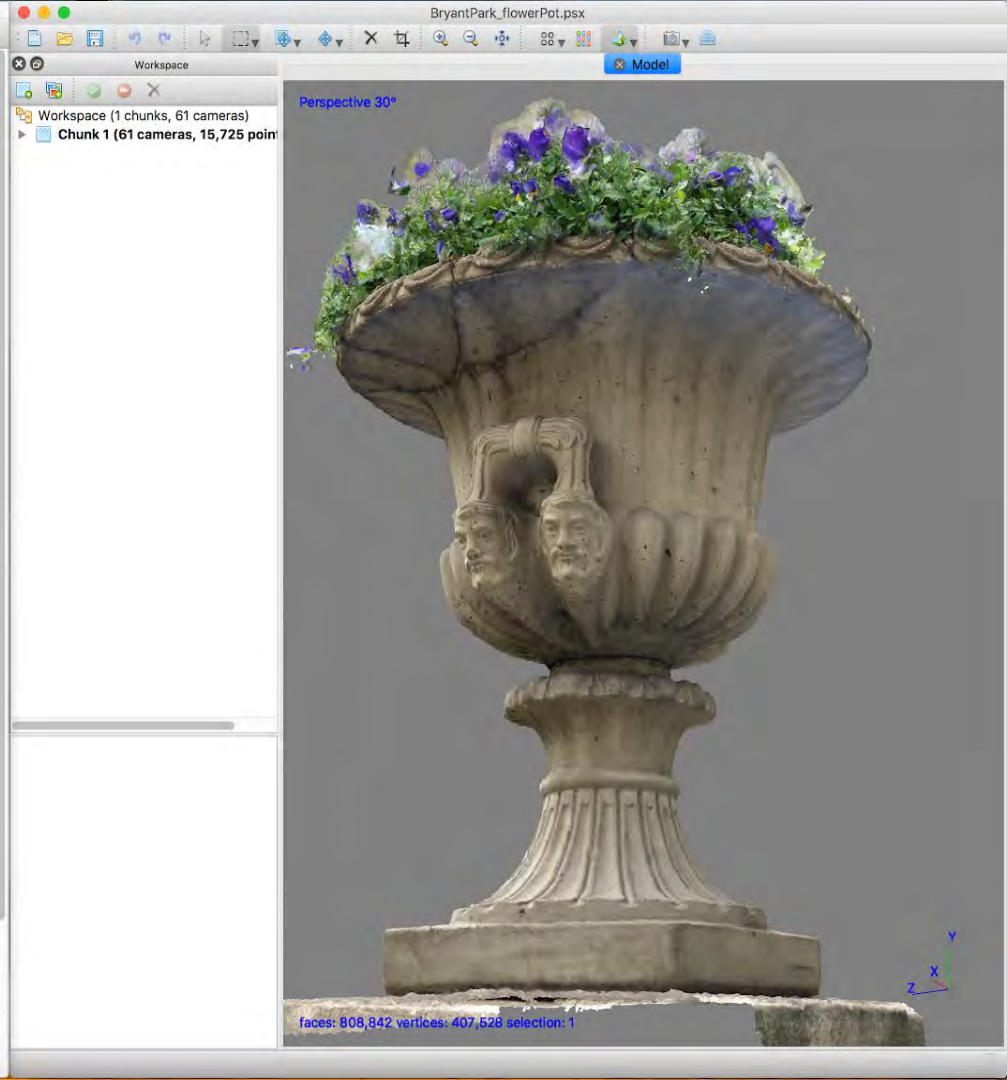
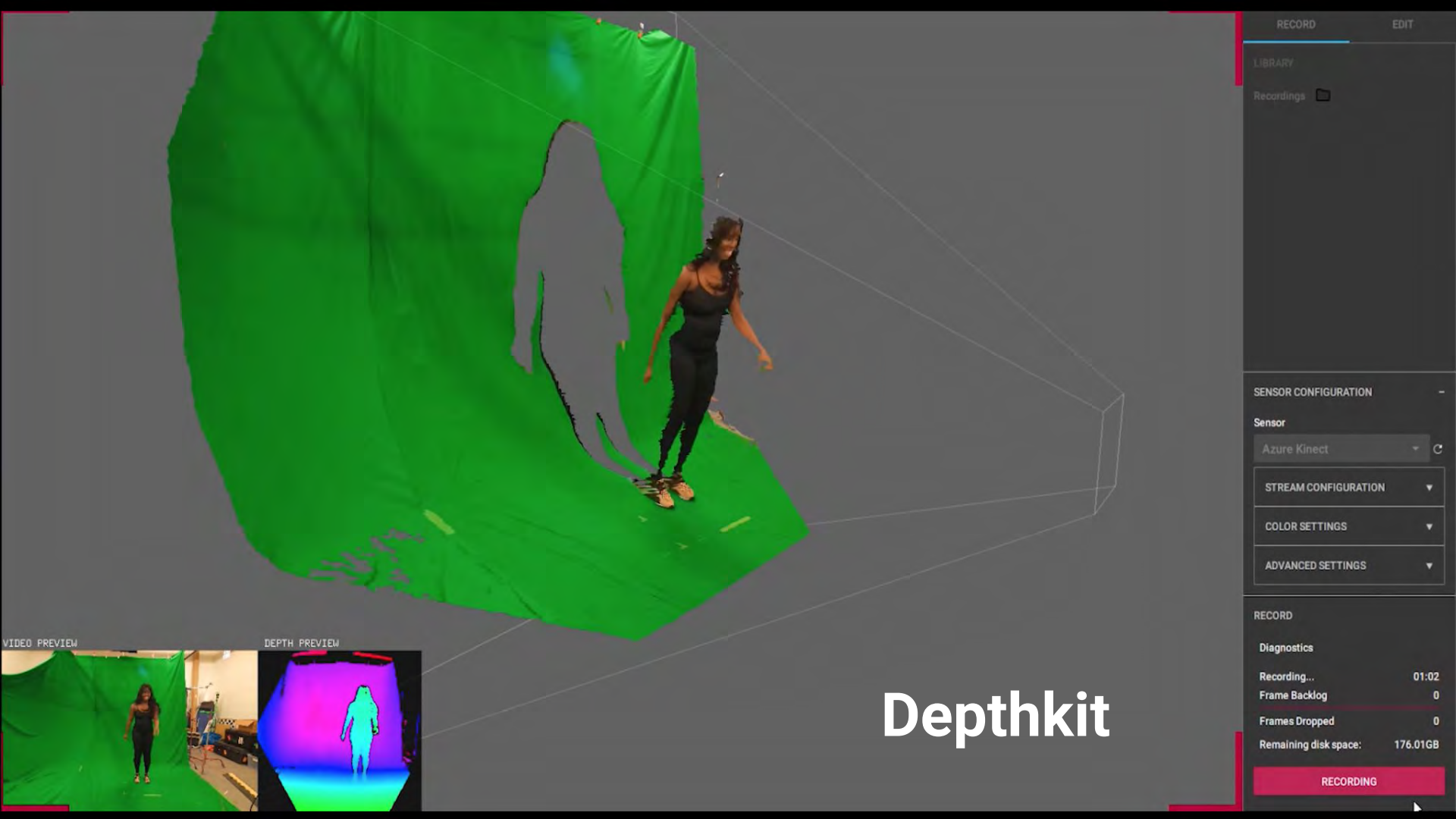

BryantPark_flowerPot.psx
Workspace
Workspace (1 chunks, 61 cameras)
Chunk 1 (61 cameras, 15,725 poin
Model
Perspective 30°
faces: 808,842 vertices: 407,528 selection: 1

Immersive Stories: Volumetric Video

3D Video Capture

Create Volumetric Video with a depth camera or camera arrays

Azure Kinect


RECORD
EDIT
LIBRARY
Recordings
SENSOR CONFIGURATION
Sensor
Azure Kinect
STREAM CONFIGURATION
COLOR SETTINGS
ADVANCED SETTINGS
RECORD
Diagnostics
Recording... 01:02
Frame Backlog 0
Frames Dropped 0
Remaining disk space: 176.01GB
RECORDING
VIDEO PREVIEW
DEPTH PREVIEW
Depthkit

Standalone VR

Oculus Go

$200

Oculus Quest

$400

Room scale VR

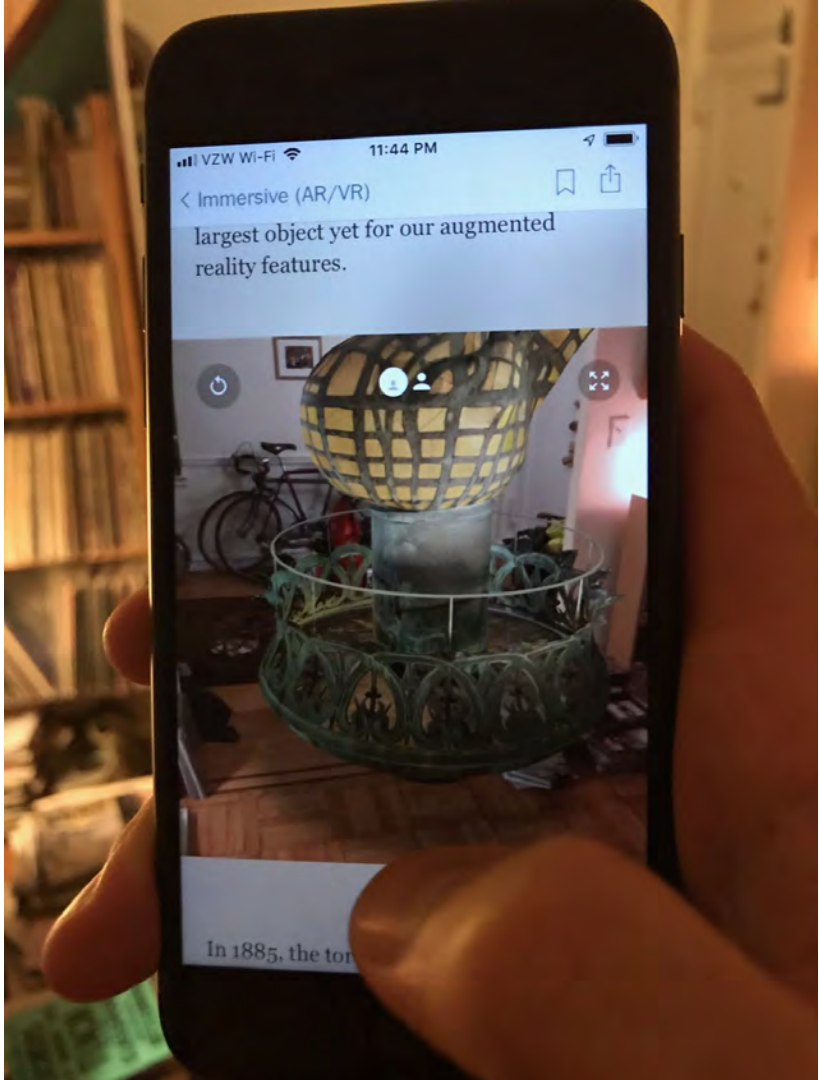
HTC Vive

Playstation VR

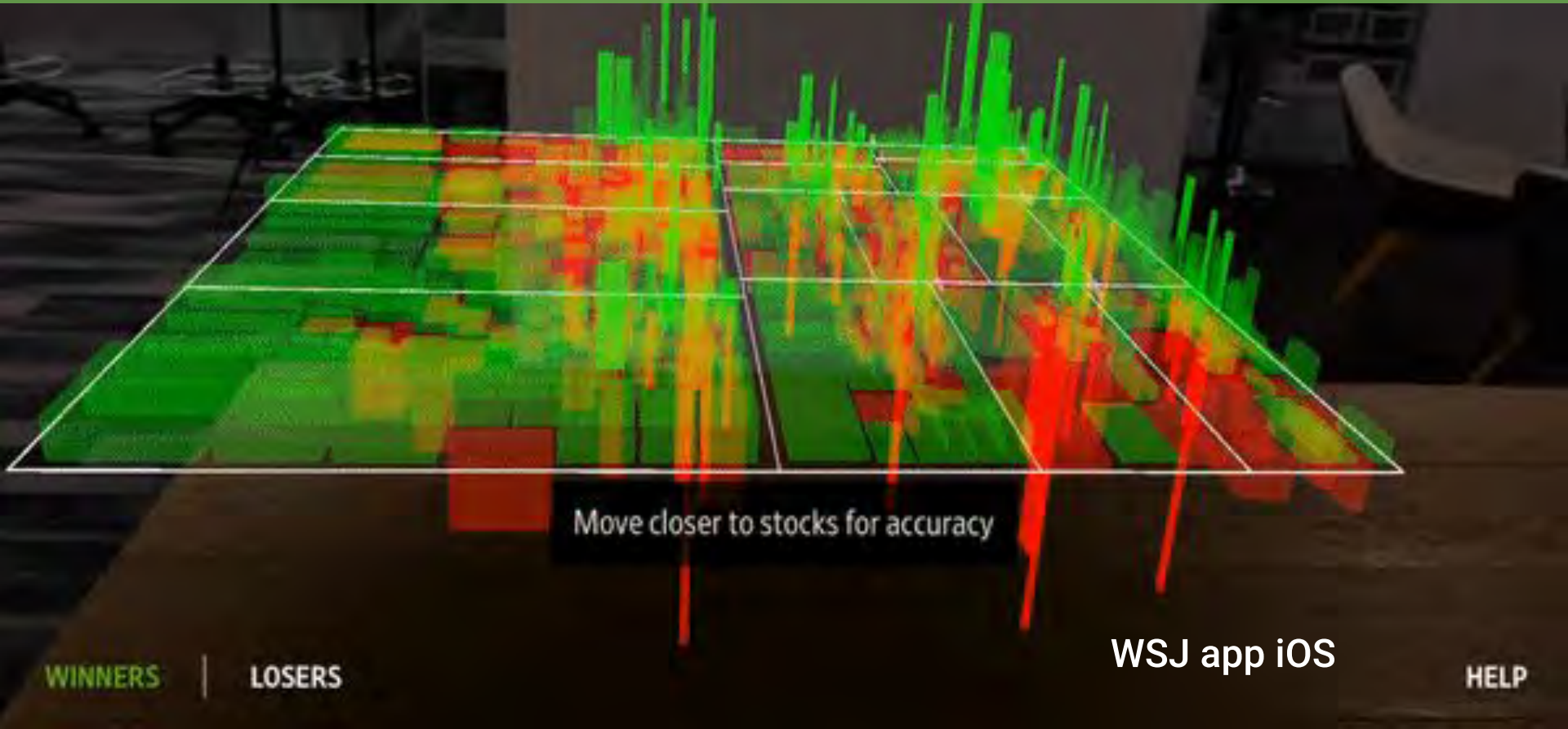
Oculus Rift

04:06
Oxford Medical Simulation

Smartphone Augmented Reality

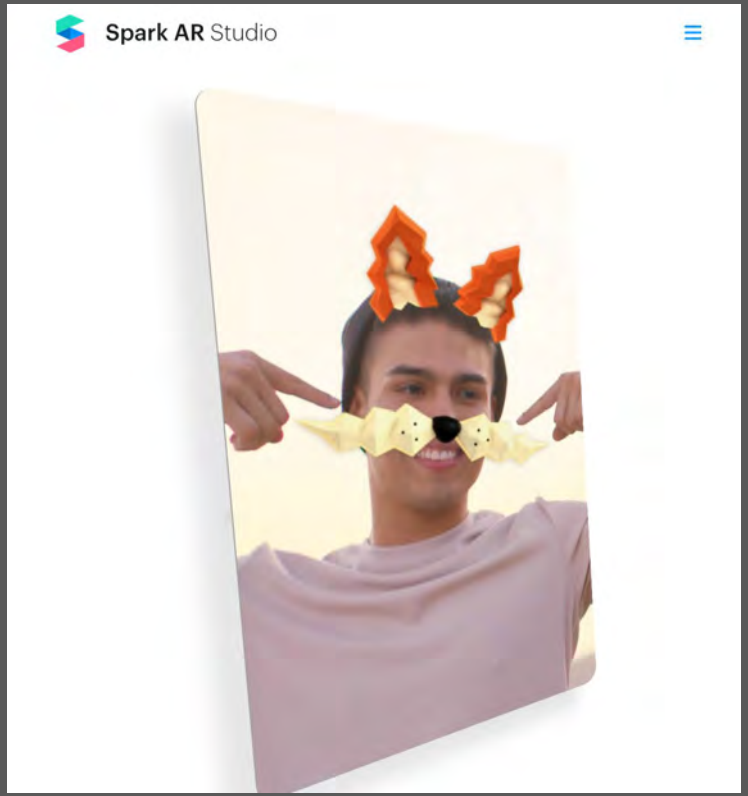


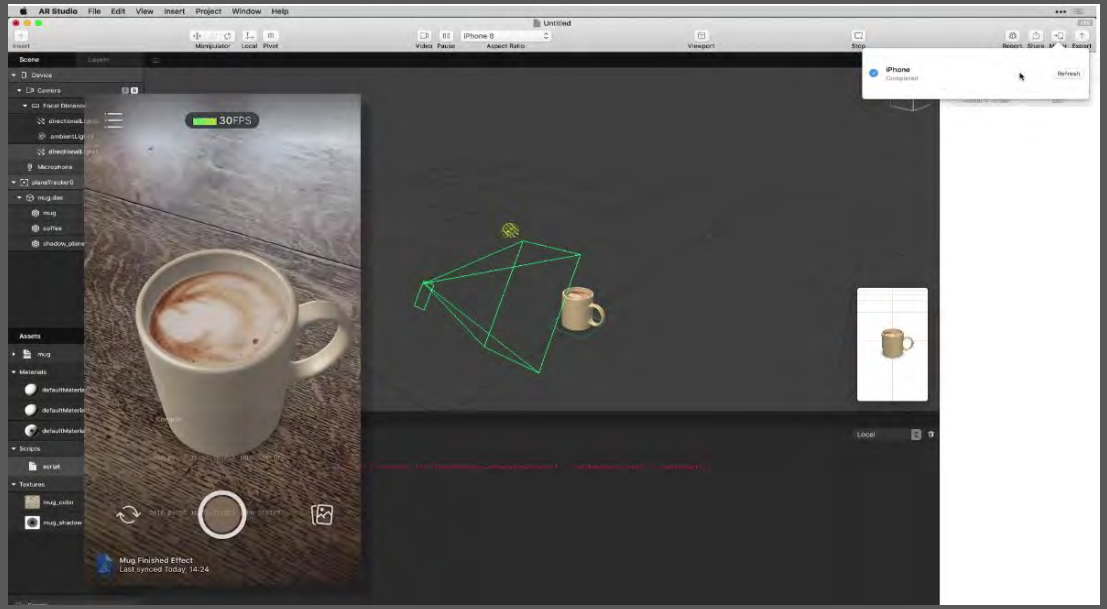
Augmented Reality Data Visualization

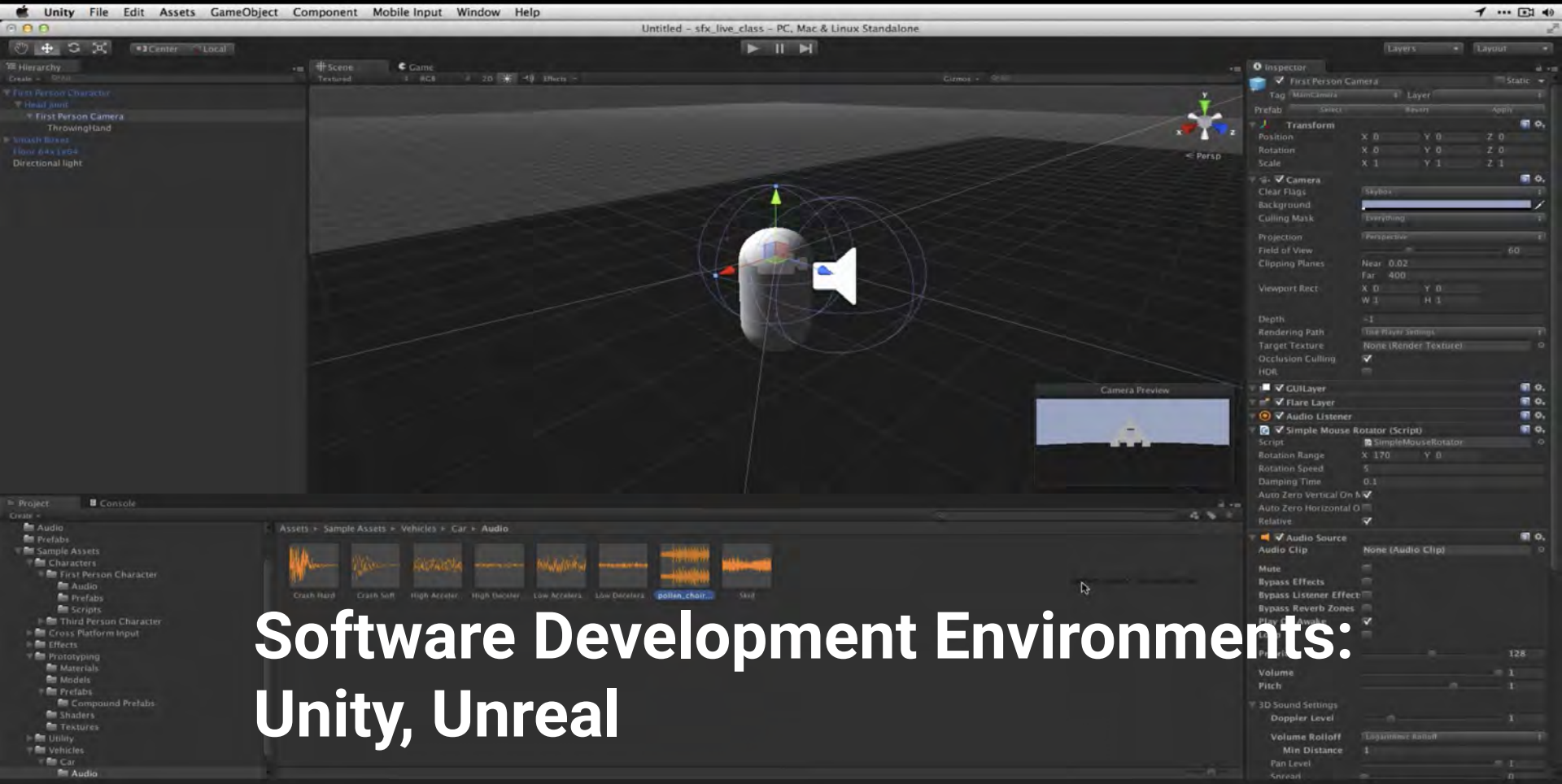


WSJ app iOS

Facebook Spark AR Studio







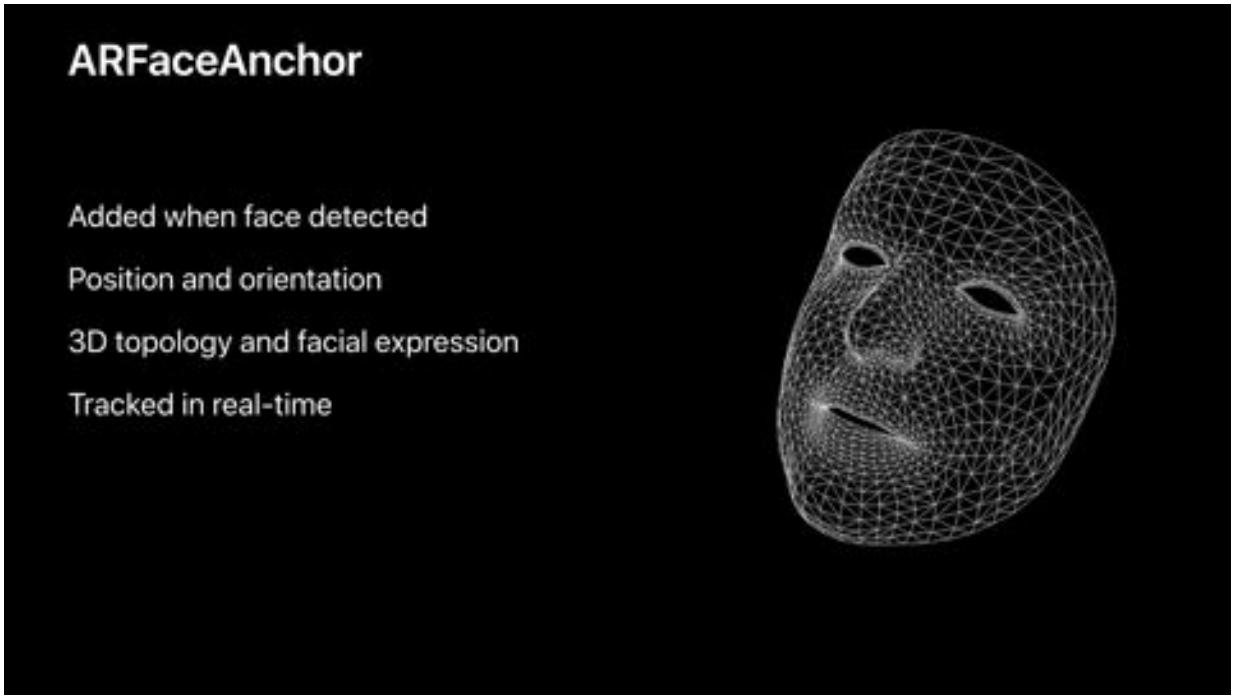
Software Development Environments: Unity, Unreal

ARCore

AR SDK for Android

ARCore

Apple ARKit



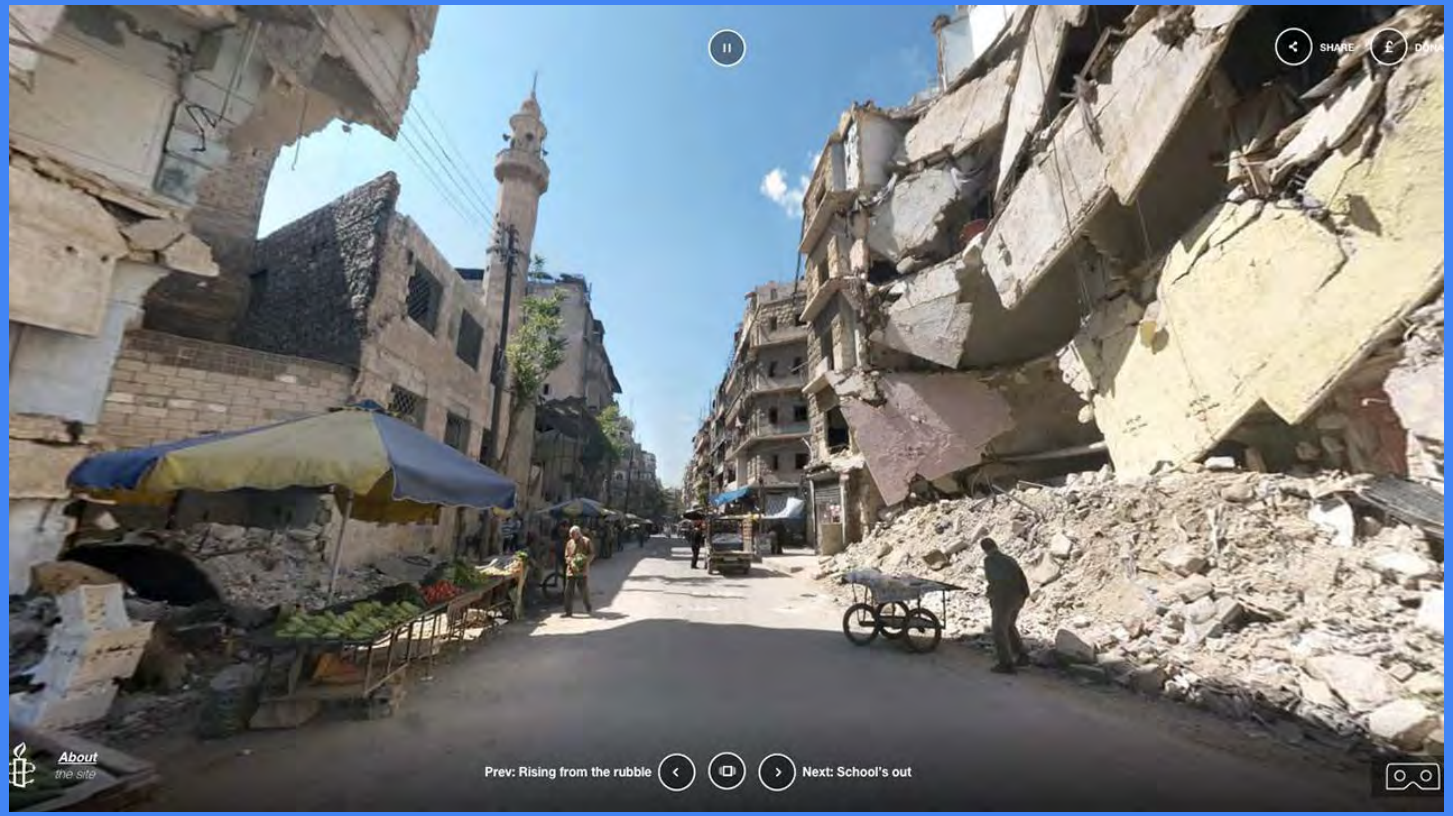
Apple

Motion tracking

Point detection and pinning

Light estimation + Face Tracking on iPhone X

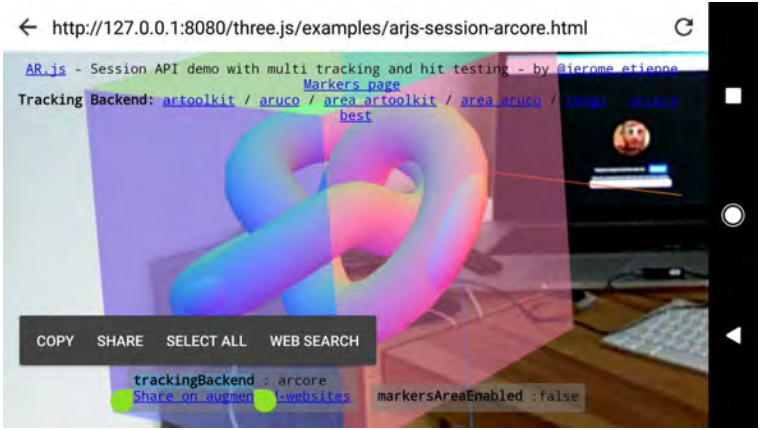
WebXR



Amnesty International, Junior

Web AR

Augmented Reality in the web browser



AR.js

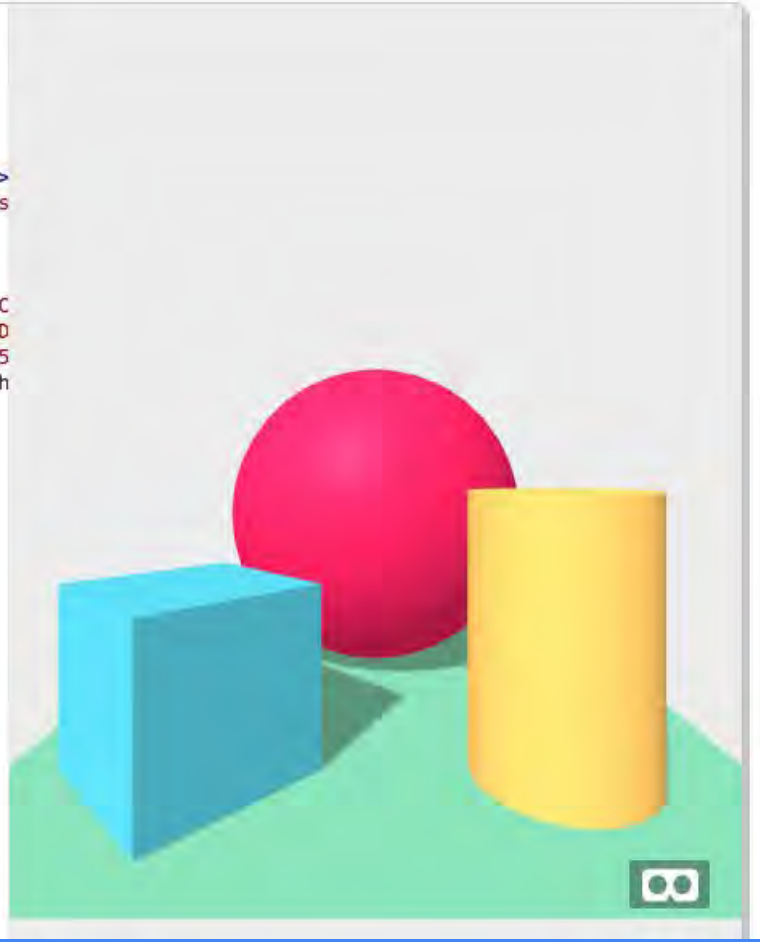
WebARonARKit

WebARonARCore

three.ar.js

Remix to Edit

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8">
    <title>Hello, WebVR! • A-Frame</title>
    <meta name="description" content="Hello, WebVR! • A-Frame">
    <script src="https://aframe.io/releases/0.8.2/aframe.min.js
  </head>
  <body>
    <a-scene background="color: #ECECEC">
      <a-box position="-1 0.5 -3" rotation="0 45 0" color="#4CC
      <a-sphere position="0 1.25 -5" radius="1.25" color="#EF2D
      <a-cylinder position="1 0.75 -3" radius="0.5" height="1.5
      <a-plane position="0 0 -4" rotation="-90 0 0" width="4" h
    </a-scene>
  </body>
</html>
```



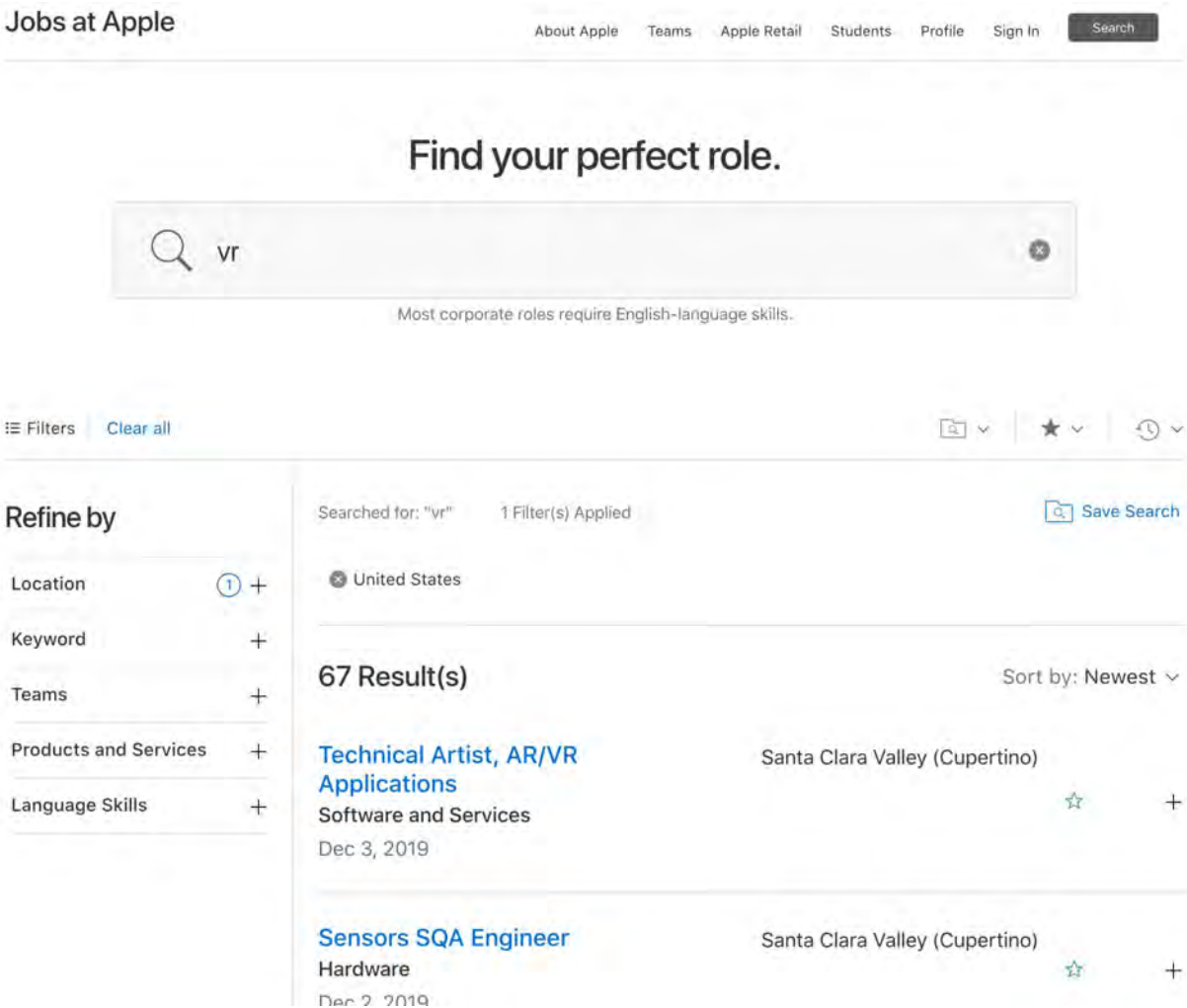
aframe.io

```
                event-set__3="_event:
                event-set__4="_event:
                set-image="on: click; target: #image-360
                sound="on: click; src: #click-sound"></a
            </script>
        </a-assets>

        <!-- 360-degree image. -->
        <a-sky id="image-360" radius="10" src="#theta1

        <!-- Image links. -->
        <a-entity id="links" layout="type: line; margi
            <a-entity template="src: #link" data-src="#t
            <a-entity template="src: #link" data-src="#t
            <a-entity template="src: #link" data-src="#t
        </a-entity>
        <a-entity id="links" layout="type: line; margi
            <a-entity template="src: #link" data-src="#t
            <a-entity template="src: #link" data-src="#t
            <a-entity template="src: #link" data-src="#t
        </a-entity>

        <!-- Camera + cursor. -->
        <a-entity camera look-controls>
            <a-cursor id="cursor"
                animation__click="property: scale; startEv
                animation__fusing="property: fusing; start
                event-set__1="_event: mouseenter; color: s
                event-set__2="_event: mouseleave; color: b
                fuse="true"
                raycaster="objects: .link"></a-cursor>
        </a-entity>
    </a-scene>
</body>
</html>
```

Remix to Edit

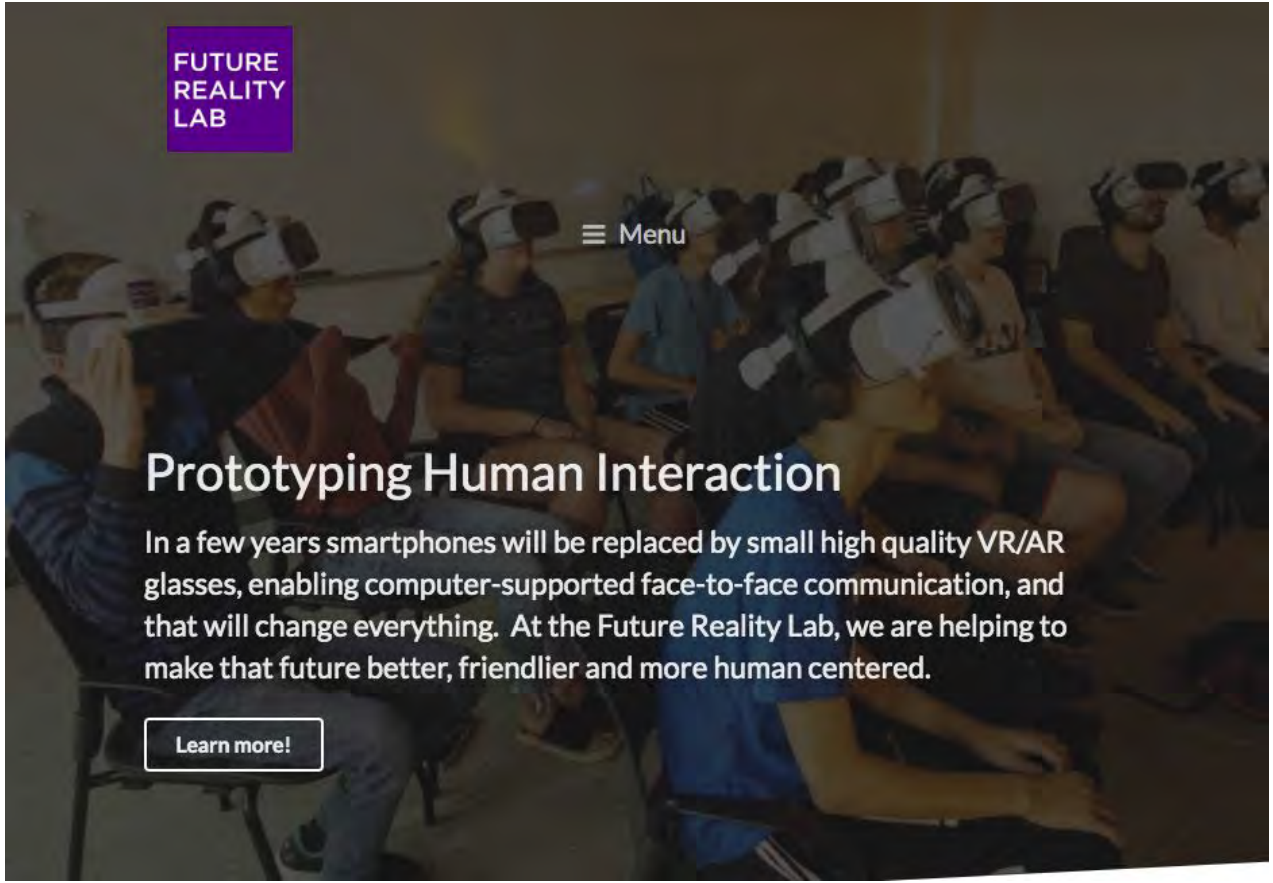
Tools

aframe.io



C++,
Swift,
Objective-C

NYU Future Reality Lab



New School XReality Center

THE NEW SCHOOL XREALITY CENTER

XReality Lab | News | Projects | Learning | About | Visit XReality Lab

NEWS

The XReality Center Featured in Campus Technology's article: 9 Amazing Uses for VR and AR in College Classrooms

Earlier this week, Campus Technology released an article: 9 Amazing Use for VR and AR in College Classrooms in which they featured The XReality Center as one of the nine […]

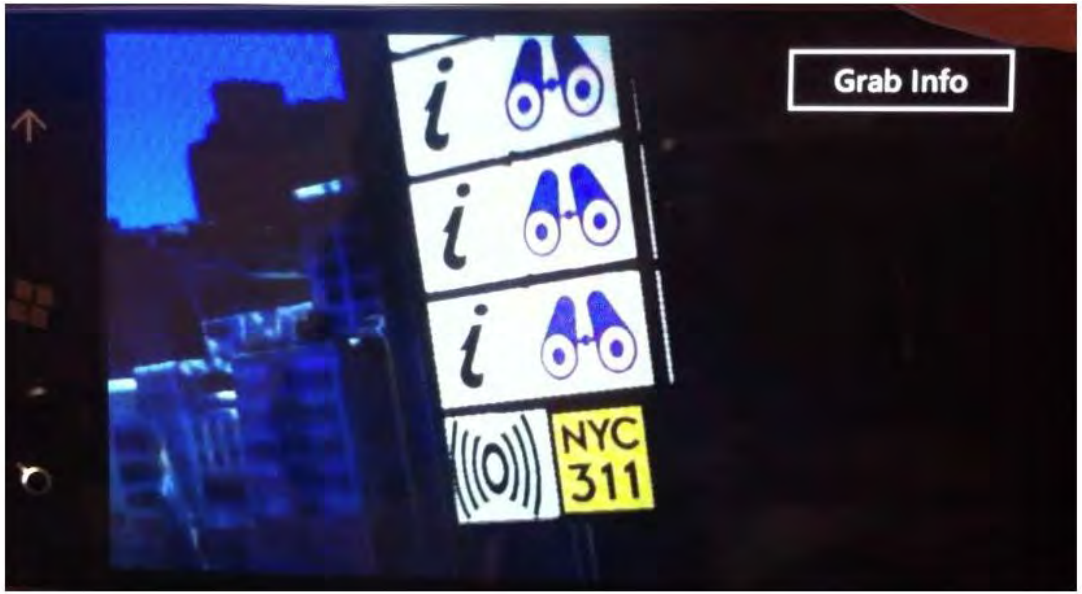
While You Wait...1.1

Navarra Novy-Williams and Carlos Johns-Dávila from the Arts Management and Entrepreneurship at The College of Performing Arts invite you to view their capstone project: While You Wait…1.1. The installation series is site-specific virtual […]

The New School + #SXSW: Maya Georgieva, Director of Digital Learning at The New School, Discusses Design Principles for XR Education

XR is generally used as a term to encompass the vast possibilities of reality warping technology, which includes VR, AR, and more. As Director of Digital Learning and the XReality […]

Columbia University Computer Graphics and User Interfaces Lab



Head 'n Hand: Combining Headworn and Handheld Mobile Augmented Reality

Nicolas J. Dedual

Steven Feiner

Harvard Augmented Reality/Virtual Reality Studio

https://news.harvard.edu/gazette/story/2019/02/at-studio-harvard-college-senior-celebrates-potential-of-ar-vr-technology/

AR/VR JOURNALISM LAB

Newmark Graduate School of Journalism at CUNY

bitly.com/newmarkarvr

Founded 2006
M.A. in Journalism
M.A. in Journalism - Spanish-language
M.A. in Social Journalism
Executive Program in News Innovation and Leadership

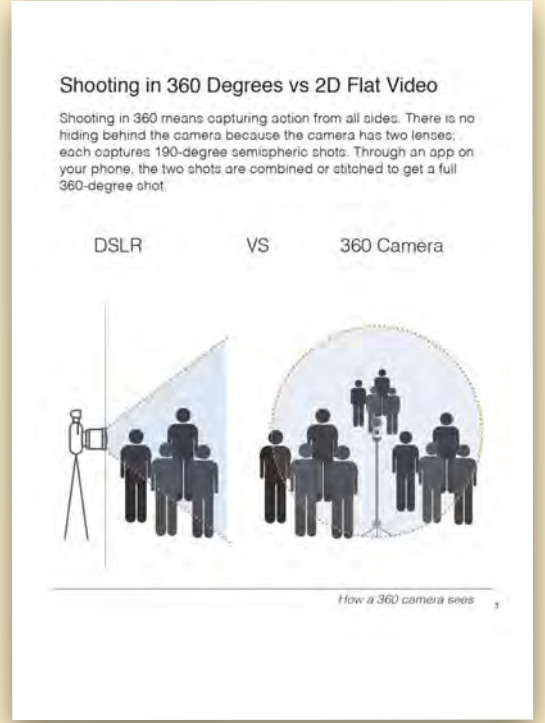
Newmark AR / VR
Journalism Lab

Local Stories in 360° Videos
bitly.com/newmarkj360

Intro to 360 for Small News Organizations

bitly.com/ intro360newsrooms

bitly.com/ introvideo360



Hands-On
Intro Workshops

Connecting the Theta to your phone

Connect to the camera you're holding, not your neighbors.

Find your camera ID on the bottom of the camera.

Meetups

Storytelling
Workshops

Photogrammetry
Volumetric Video
A-Frame
Spatial Audio

LEHMAN COLLEGE | CUNY
UNITY WORKSHOP
VR TRAINING ACADEMY
CURRICULUM
EVENTS & MEDIA
NEWS
OPEN HOUSE
Virtual Reality Training Academy & Development Lab
@ CUNY on the Concourse

VIVE
The Hedwig Schindler Virtual Reality Lab
Baruch

Macaulay Announces the NYU/Tandon/NYC Media Lab Augmented Reality/Virtual Reality Internship Program

Creating an Immersive Learning Experience Using Virtual Reality at CSI

(New Technologies and Approaches)

Immersive learning using VR allows students to interact within 3D worlds, offering an opportunity to engage, improve material retention and be exposed to “real life” situations. CSI will discuss the planning involved in creating a VR lab and choosing the technology to support users, while being cost efficient. Faculty will demonstrate how VR worlds, created using 3D cameras, were integrated into classes. Furthermore, attendees can experience this technology for themselves.

Heidi Bertels, Assistant Professor of Management

Linda John, Director of Academic Computing

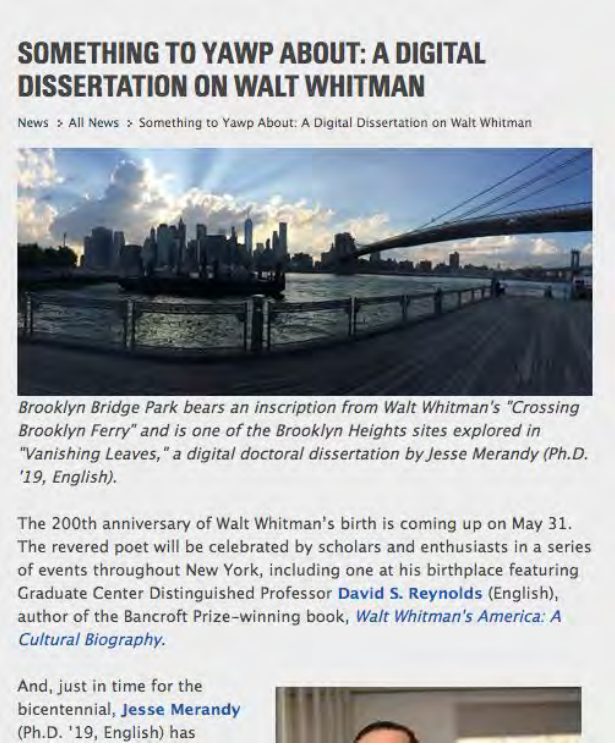
Patricia Kahn, Chief Information Officer and Assistant Vice President for Information Technology Services

Nerve Macaspac, Assistant Professor of Geography

All of College of Staten Island

Digital Dissertation with Augmented Reality - GC

Jesse Merandy (Ph.D. ’19, English)



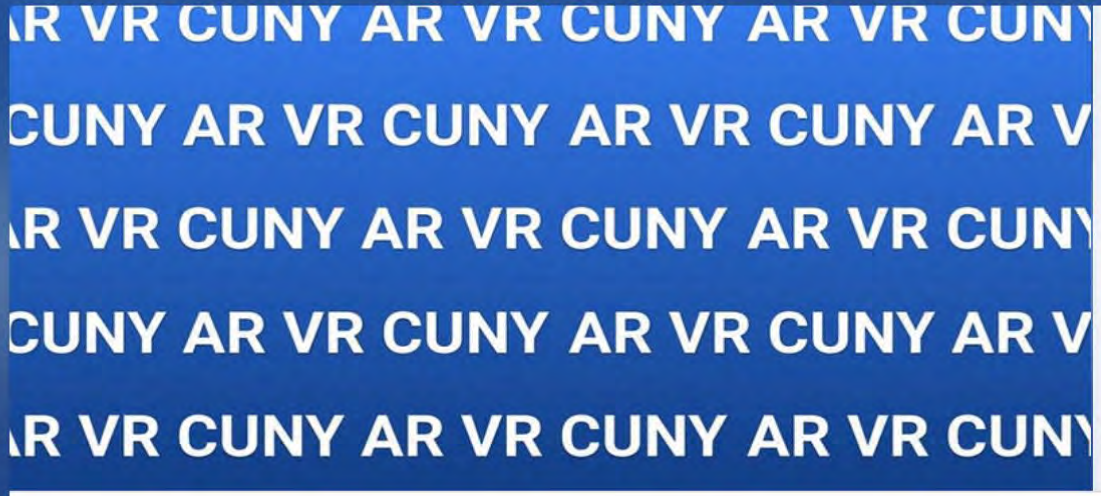
SOMETHING TO YAWP ABOUT: A DIGITAL DISSERTATION ON WALT WHITMAN

News › All News › Something to Yawp About: A Digital Dissertation on Walt Whitman

Brooklyn Bridge Park bears an inscription from Walt Whitman's "Crossing Brooklyn Ferry" and is one of the Brooklyn Heights sites explored in "Vanishing Leaves," a digital doctoral dissertation by Jesse Merandy (Ph.D. '19, English).

The 200th anniversary of Walt Whitman’s birth is coming up on May 31. The revered poet will be celebrated by scholars and enthusiasts in a series of events throughout New York, including one at his birthplace featuring Graduate Center Distinguished Professor **David S. Reynolds** (English), author of the Bancroft Prize–winning book, *Walt Whitman's America: A Cultural Biography*.

And, just in time for the bicentennial, **Jesse Merandy** (Ph.D. '19, English) has



OCT
22

Fall CUNY AR/VR Meeting

by Matt MacVey Follow

Free

Sales Ended | Details

Join an informal, interdisciplinary, pan-CUNY meeting of faculty and staff interested in and working with augmented and virtual reality

25 Attendees from 11 Campuses

- Intros from attendees about what they are working on with AR and VR

VR/AR News and Opportunities

- RLab. Janice Brown will give an overview of the RLab and

Date And Time

Tue, October 22, 2019
9:30 AM – 11:00 AM EDT
Add to Calendar

Location

CUNY Graduate Center
365 5th Avenue
Science Center (Room 4102)
New York, NY 10016
View Map

Discussion

- What resources can we share?
- What role should CUNY play in NYCs immersive and spatial computing ecosystem?
- What should this group be?

Lab Spaces

- Space and equipment

Events

- Lectures, demo sessions, Meetups

Teaching and curriculum

- Best practices, frameworks, interdisciplinarity

Resources + Onboarding tools

- Knowledge hub
- Examples of good VR and AR work

Access and understanding

- How can we promote access, understanding and inclusion in VR and AR tech with our students, faculty and staff?

ANNOUNCEMENTS /OPPORTUNITIES

CUNY Academic Commons ▼ Help Register Log

CUNY AR/VR Immersive Interest Group

HOME COURSES RESOURCES ANNOUNCEMENTS

Academic Commons site in progress
arvr.commons.gc.cuny.edu/

Hello, this site is meant to be a clearing house of information, links and resources for CUNY students, staff and faculty working with immersive and spatial technology including virtual reality and augmented reality.

RECENT ANNOUNCEMENTS

Group Meeting October 11, 2019

REALITY
HACK
MIT XR HACKATHON
JANUARY 16 - 20, 2020
APPLY NOW
www.mitrealityhack.com/

THANKS!
bitly.com/newmarkarvr
matthew.macvey@journalism.cuny.edu